

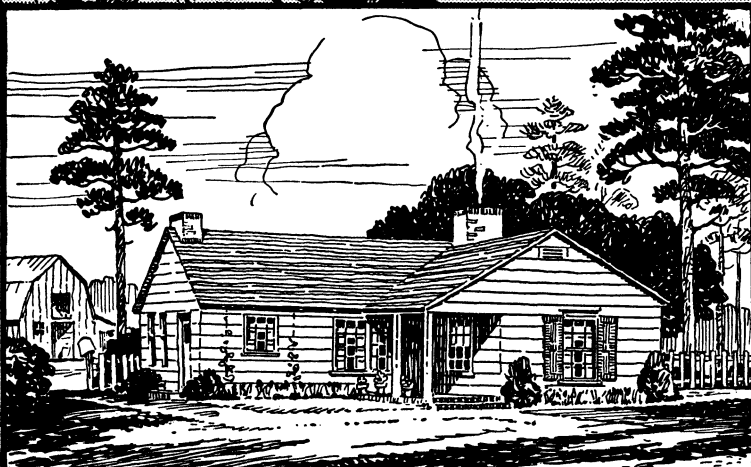
Historic, archived document

Do not assume content reflects current
scientific knowledge, policies, or
practices.

U. S. DEPARTMENT OF AGRICULTURE
DIVISION OF FOREST PRODUCTS

SEP 24 1945

U. S. DEPARTMENT OF AGRICULTURE



FARM BUILDINGS

FROM

*Home-grown timber
in the South*

U. S. DEPARTMENT OF AGRICULTURE

FARMERS' BULLETIN NO. 1975

Timber for building purposes is readily available to farmers in the Southern States. Most of the farm-owned woodlands contain some timber trees suitable for lumber manufacture. By converting these trees into lumber products and using the skills and labor available in rural areas, the Southern farmer can, with a minimum of expense, equip his farm with a comfortable home and other needed buildings.

No market offers higher values for farm-grown timber suitable for building purposes than does home use. With a limited amount of cash, the average farm woodland owner can provide himself with a supply of boards, dimension stock, and other lumber needed for repairs and construction of new buildings. Such low-cost improvements will improve the appearance of the farm, increase its real estate value, and pay dividends in better living.

The Southern farmer can well afford to protect his woodlands from fire and manage them with a view to producing a continuous supply of lumber and other timber products both for use on the farm and sale to local wood-using industries.

Washington, D. C.

Issued September 1945

FARM BUILDINGS FROM HOME-GROWN TIMBER IN THE SOUTH

By W. K. WILLIAMS,¹ *Senior extension forester,
Extension Service and Forest Service*

Contents

	Page
Introduction.....	1
Growing timber for home use.....	1
Planning the building operation.....	4
What one community has done.....	4
Home builders' schools in Arkansas.....	5
Cooperative community building.....	8
Buildings for crops and livestock.....	10
Timber for farm home, tenant house, and other structures.....	12
Getting out the timber.....	14
Logging and milling.....	14
Drying.....	14
Lumber for repairs.....	16
Southern woods for farm buildings.....	17
Publications on the construction of farm buildings and related subjects..	18

INTRODUCTION

Many farmers in the South with timber on their land suitable for sawing into lumber have overlooked the opportunity to construct good farm buildings. Some, who have been cutting and selling timber for years, have not learned to utilize their forest products and labor resources for the improvement of their own farm buildings. Others have not been able to finance the structures necessary for the successful operation of their farms. When materials and labor must be purchased, and the cash income from the farm is low and hardly takes care of family needs there is little prospect of making extensive repairs or erecting new buildings. Consequently, the condition of farm structures has steadily deteriorated in the South until many of them are in poor condition and some unfit for habitation. About one-third of the farmhouses in the South have poor roofs, chimneys, walls, and foundations and should be replaced with new buildings or given major repairs; another third are in fair living condition but need some repairs; and the remaining third are in good condition, requiring only general maintenance.

GROWING TIMBER FOR HOME USE

In some communities farmers have pointed the way to a practical solution of the rural housing problem through a self-help program, using native materials, such as timber, stone, sand, and gravel, available on the farm or in the locality.

¹ Grateful acknowledgment is made for the use of photographs and other assistance contributed by State extension foresters and county agricultural agents.

Wood is a natural building material in the South (fig. 1). Frequently, in cutting timber for sale, farmers reserve a few of their larger, straighter trees—often called “board trees”—to meet future lumber needs; hence, the farm woods can rightfully be regarded as insurance against destruction of farm buildings. Farmers have found that by using home-grown timber, repairs can be made and new

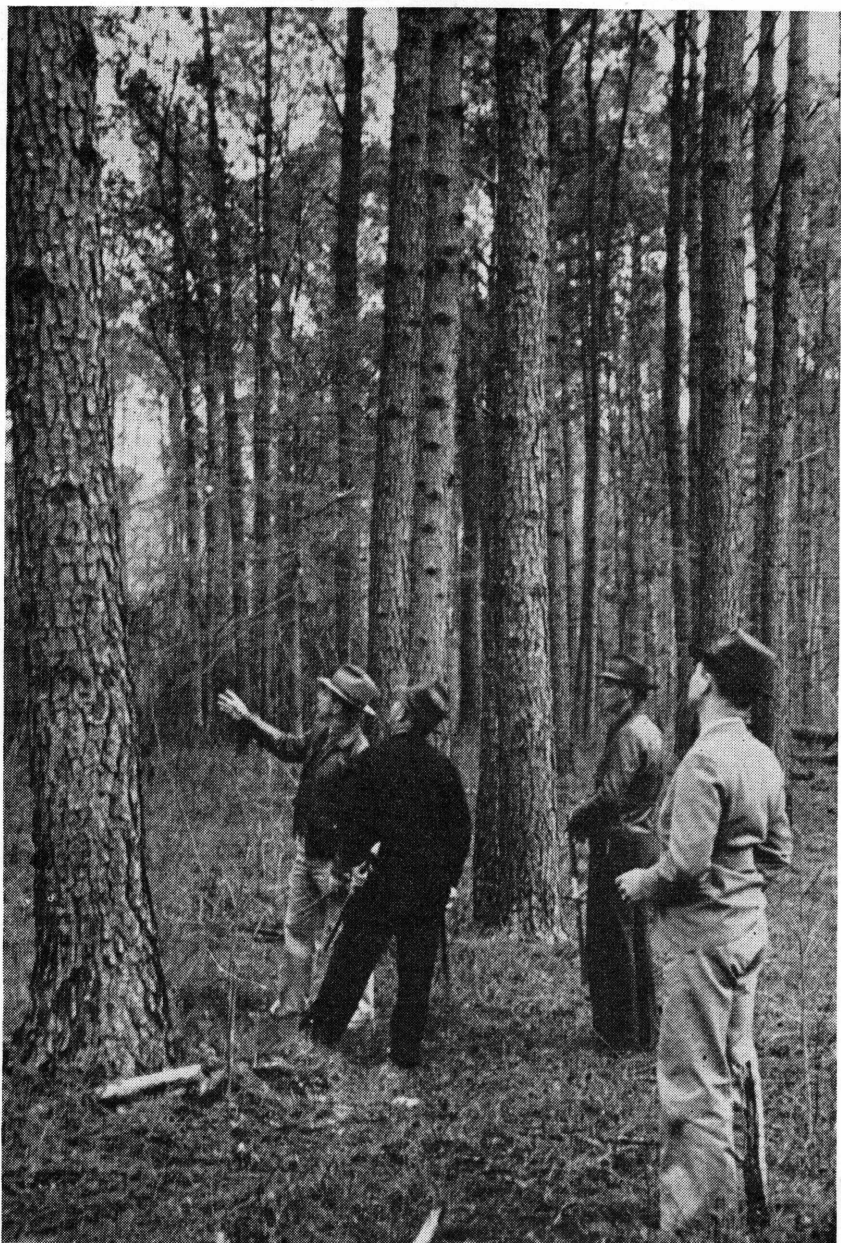


F-202857

FIGURE 1.—A stand of hardwood timber that will yield good-quality lumber.

buildings constructed without resorting to a mortgage or other burdensome indebtedness, and without using funds needed for carrying on farming operations. The growing of a few large board trees should therefore have a place in the management of every farm.

Assistance in the production of timber crops for farm use and in organizing the woodland for continuous output and maximum cash income can be obtained from your local forester, county agricultural agent, or State forestry department (fig. 2).



F-397874

FIGURE 2.—Alabama farmers studying the management of a loblolly pine stand. Trees like these yield a good volume of sawlogs of satisfactory quality for farm-building purposes.

PLANNING THE BUILDING OPERATION

Timber of sufficient size, quantity, and quality; equipment for logging; a local sawmill for converting logs into lumber; and farm labor are essential to a farm-building program based on the use of home-grown material. Carpenters and others skilled in different phases of construction are usually available on the farm or in the neighborhood. It may be more difficult to find men skilled in masonry, plumbing, and electrical work.

A building plan and a list of materials, giving the quantity and specifications for all items, are needed if a building job is to be done with a minimum loss of time and without waste of materials. Frequently, a local carpenter can help make such a list, so that the builder can determine which items may be obtained from the farm and which must be purchased. The price of materials to be purchased and the cost of sawing logs, planing lumber, and common and skilled labor, if needed, should be known before the building operation is started. This should provide a close estimate of the total cash outlay required.

All cost figures given in the examples of farm building in this bulletin are based on prewar conditions. This means that there would be a larger cash outlay on similar items if purchased now. The fact that current prices are higher should be an inducement to use farm labor and home-grown lumber.

Your county agricultural agent at the county extension office, or the agricultural engineer of the State agricultural college, can advise you on the types of buildings suitable for farm use, construction details, and methods of utilizing native materials. Information on measuring and harvesting farm timber for building purposes and converting it economically into lumber can be obtained from your county agent or State extension forester.

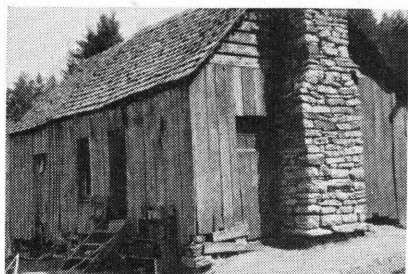
WHAT ONE COMMUNITY HAS DONE

Many Southern communities have led the way in the successful use of home-grown timber in constructing much-needed farm buildings. The idea was proposed to farmers at a community-organization meeting in Roane County, Tenn. Taking stock of their home resources, many of these farmers found that they had much standing timber which could be put to good use. Others discovered and planted native shrubbery to beautify their homes. Much was accomplished at very little cost.

J. A. Campbell was one of these Roane County farmers who needed a larger and better home for his family of five growing children. Because of small returns from crops and other circumstances, it seemed out of the question to build a new home, until he asked himself: "Why not build with materials available on the farm?" The timber on his place was of fair quality, and there was a small portable sawmill nearby. Some 6,000 board feet of timber were cut and hauled to the mill for sawing. In addition, he purchased 1,500 feet of dressed lumber and other necessary materials, such as doors, windows, hardware, paint, bricks, cement, and roofing. The purchased items, plus \$23.50 for hauling and manufacturing his logs into lumber, brought the total expenditure for the new house to only \$220.50 (fig. 3).

John Edmonds, another Roane County farmer, owned only a few acres of land on which there was little or no timber. With a family

of seven children, he needed a good home. A neighbor also needed a new house, and Edmonds hired out to build it, trading his labor for 6 acres of land covered with young pines valued at \$100. From this tract Edmonds and his sons cut 6,000 feet of straight, clean poles suitable for log construction. Flooring, doors, window sash, glass,

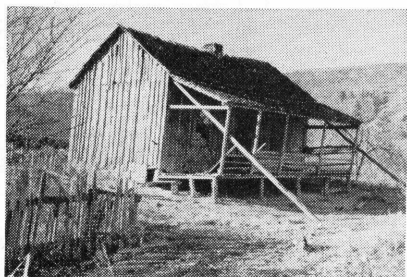


TENN. AGRICULTURAL EXTENSION SERVICE

FIGURE 3.—A, The old J. A. Campbell home; B, the new house which the family built largely with home-grown timber. There was a small cash outlay for materials and services.

hardware, and additional lumber and dressing brought the cost to \$122. Shingle boards were made on the farm. The new Edmonds home has five rooms and measures 32 by 24 feet over-all. Improvements such as cupboards, shelves, and other conveniences are being added as time and money permit (fig. 4).

These are but two of many examples of farm building construction in Roane County. Guided by the county agricultural agent, the



TENN. AGRICULTURAL EXTENSION SERVICE

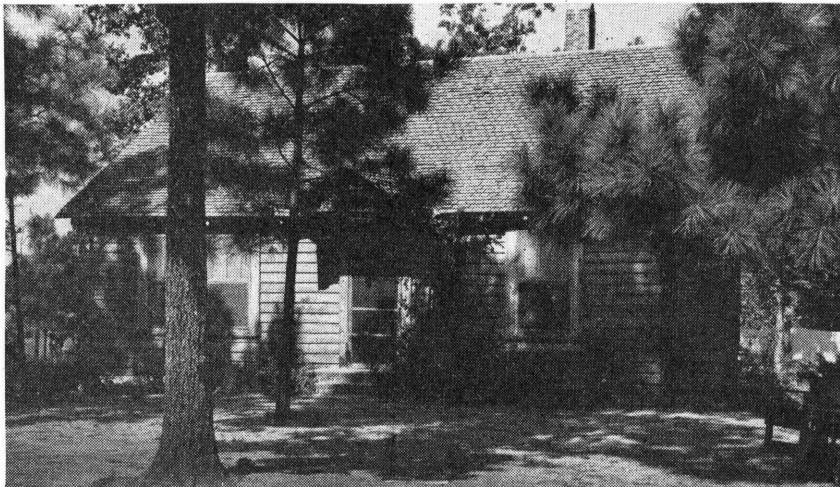
FIGURE 4.—A, The old John Edmonds home in Roane County, Tenn. B, The new house, built largely of pine poles cut from a 6-acre tract obtained in exchange for labor on a neighbor's home.

people of this Tennessee county over a period of several years built 9 new farm homes, 15 new barns and smaller buildings, and made major repairs on 15 homes. Practically all of the lumber came from farm-grown timber.

HOME BUILDERS' SCHOOLS IN ARKANSAS

In Arkansas the agricultural extension service conducted a series of home builders' schools, where building plans were discussed and uses of native materials emphasized. Farmers attending the schools were given instruction in the selection and processing of trees for

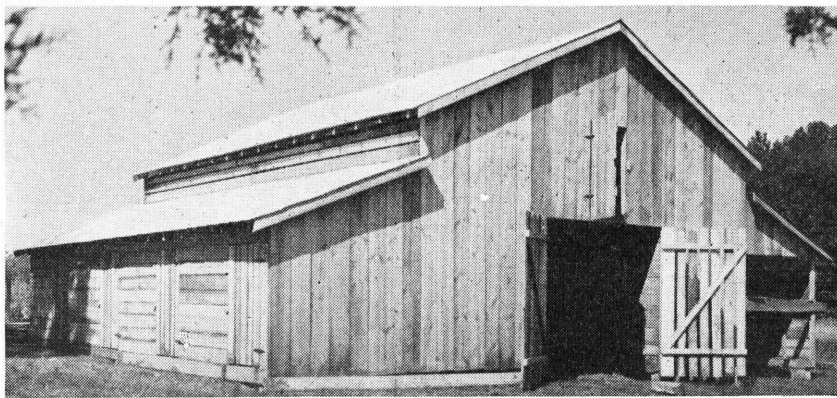
logs and lumber; the construction of foundations, walls, and roofs; room and closet arrangement; water and sewage systems; the mixing



S-2948

FIGURE 5.—This four-room house owned by Mr. and Mrs. Olan Hardie, Drew County, Ark., is "home-grown and home-made".

of concrete; and interior decoration. In some counties the home builders' schools were followed by demonstrations of selective cutting of woodlands so as to provide for a continuous yield of timber prod-



S-2950

FIGURE 6.—Rough oak lumber cut from the farm woods was used in building this barn on the J. N. Nicholson farm in Drew County, Ark.

ucts. The extension service of the State agricultural college made farm building plans available.

Many attractive and convenient farm homes and serviceable buildings have been built as a result of this program. In Drew County, Mr. and Mrs. Olan Hardie erected a fine four-room house at a cost of \$150 with the use of home labor and farm material, mostly

rough lumber. The Hardies started their building with a few acres of unimproved land and \$13 in cash, and exchanged work and farm products to pay for sawing their logs at the mill (fig. 5).



S-2931

FIGURE 7.—When Mr. and Mrs. Howard Mitchell, White County, Ark., built this home they did all the carpentry and masonry work.

The woods on the J. N. Nicholson farm in Drew County, supplied rough oak lumber for a large new barn, built with the help of hired labor. Cost of the job was \$238.50 (fig. 6). When the barn was



ARKANSAS AGRICULTURAL EXTENSION SERVICE

FIGURE 8.—Oak logs and hand-rived shingles went into this dwelling built by Mr. and Mrs. Allen Cone, Fulton County, Ark.

completed, Mr. Nicholson had 6,000 board feet of seasoned lumber left which he plans to use in building a new home.

Howard Mitchell of Searcy, in White County, cut the lumber for his house from the farm woodland and had it sawed by a local mill which was paid with part of the cut. Dressing the lumber cost \$55. Mr. and Mrs. Mitchell did their own carpentry work. Mrs. Mitchell

also laid the stone and nailed the weather boarding. Stone used for the porch and foundation was taken from the farm. Paint, brick, cement, lime, and hardware were purchased, and \$7 was paid for labor—total cash expenditures amounting to \$178.70. Construction was started in March, and the family moved into their new home the following August (fig. 7).

Mr. and Mrs. Allen Cone, of Fairview, Fulton County, Ark., obtained enough timber from their 80-acre tract to supply logs and other materials for a new house. Sleepers were hand-hewn and shingles hand-rived. The house is 16 by 30 feet and contains two bedrooms, a living room, and a dining room. The total cash outlay was only \$52 (fig. 8).

These are but a few illustrations of the results reported by farmers in many Arkansas communities. In one county alone 69 farm homes, 400 brooder houses, and 90 barns were built in one year largely from native materials.

COOPERATIVE COMMUNITY BUILDING

Using local labor and native materials, farmers in some communities in the South have undertaken cooperative or community building



F-334190

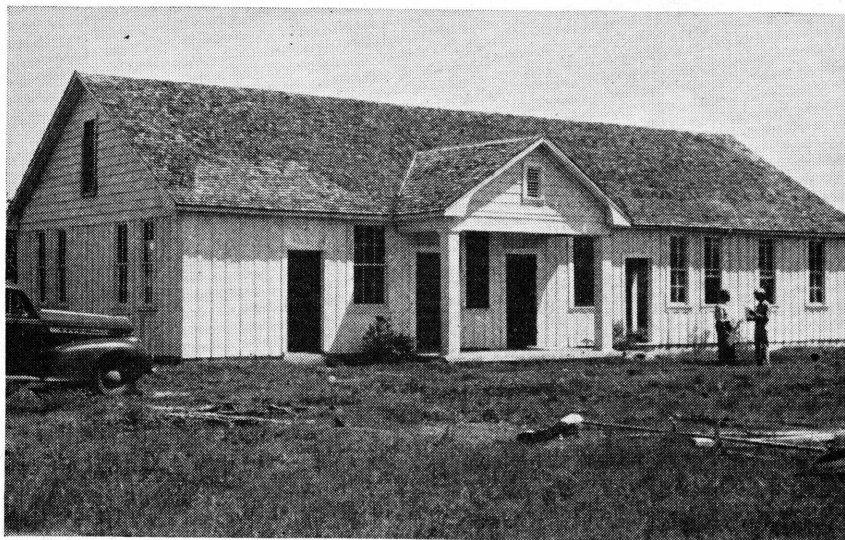
FIGURE 9.—State extension forester showing Texas farmers how to saw lumber with a small portable sawmill.

projects, such as community houses, workshops, and educational or recreational centers. The neighborhood "barn raising" or "house raising" has also come back into favor.

In Texas, for example, the extension farm forester of the State Agricultural and Mechanical College has conducted numerous demonstrations of building with native materials that have resulted in

improvements on many farms (fig. 9). At La Grange, Negroes under the leadership of E. A. Randolph, Negro county agent, became interested in constructing a building to be used for extension demonstrations and offices (fig. 10). With the assistance of the farmers' county council and a Negro cooperative, they cut 16,000 feet of lumber and 25 squares of shingles for a building 20 by 64 feet. The county provided \$200 for sawing the lumber and an additional \$450 for window sash, hardware, cement, and other materials not obtainable from the farms. With a total outlay of \$650, a building was erected that is valued at \$3,000. It includes a model farm kitchen, a council meeting room, offices for two agents, and a blacksmith shop.

An interesting type of group building project grew out of demonstrations conducted by the county agricultural agent in Jasper

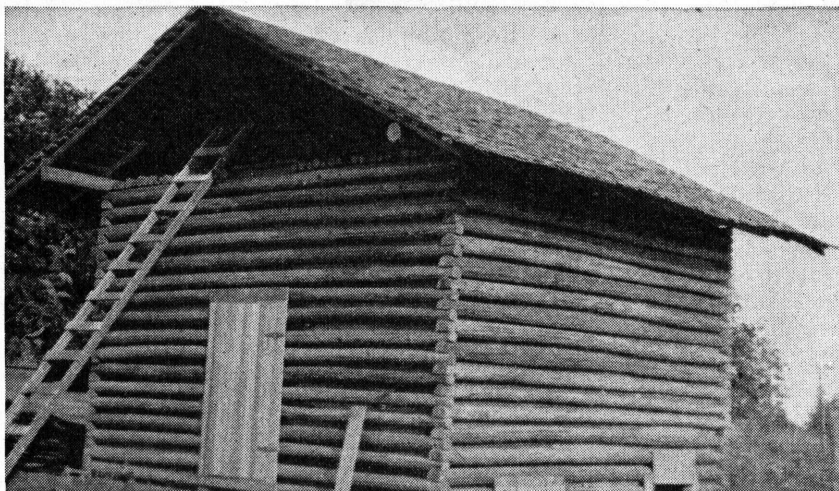


F-403318

FIGURE 10.—This Negro extension building, a cooperative undertaking at La Grange, Tex., houses a model farm kitchen, farmers' county-council meeting room, offices for two extension agents, and a blacksmith shop.

County, Tex. Here the farmers, who specialize in growing sweetpotatoes, needed storing and curing houses. More than 20 such buildings were erected with farm-grown logs, mud, and sawed boards. The foundations were made of gravel or cement. Very little material was purchased. The total cost ranged from \$5 to \$25 per structure. Two types were erected, one with insulated roof and the other with insulated ceiling. Each can hold 2 carloads of sweetpotatoes. With a good ceiling and roof, the home-made log structure proved as efficient in curing sweetpotatoes as those which cost much more.

The sweetpotato house built on the Daugherty farm near Kirbyville, Tex., is a good example of low-cost farm-building construction (fig. 11). The cash outlay was less than \$5, the following materials being used: 36 logs, 6 inches in diameter, for the two ends; 36 logs, 6 inches in diameter, for the two sides; and 2 oak logs, 12 inches in diameter, for the foundation; and 40 poles, 2 to 3 inches in diameter,



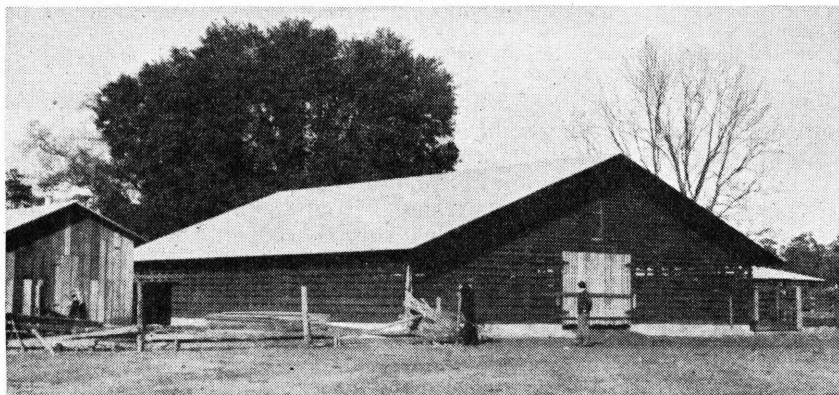
TEXAS AGRICULTURAL EXTENSION SERVICE

FIGURE 11.—Sweetpotato house on the Daugherty farm near Kirbyville, Tex., built with a cash expenditure of about \$5.

for the ceiling. The roof was made of farm-sawed boards and shingles, and the doors and windows of cull lumber. The cracks in the sides and ends were filled with a mixture of mud, moss, and grass.

BUILDINGS FOR CROPS AND LIVESTOCK

Buildings to store crops and house or protect livestock, poultry, and machinery can be erected at minimum cost by using farm timber. Many farmers in the South have built economical and efficient structures for these purposes. Although finished lumber permits of a better construction job, rough lumber often serves equally well for barns, sheds, and similar buildings. Rough lumber, however, must be

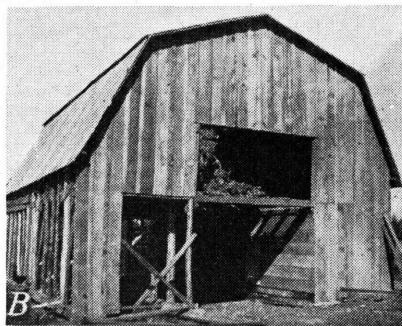
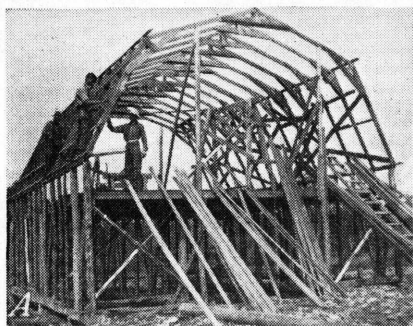


F-407244

FIGURE 12.—This spacious cattle barn, 60 by 65 feet, on the Albert Everett farm in Washington County, Fla., was erected with lumber and timber products grown on the farm. On the left is a small house for ground feed.

well manufactured and seasoned—for example, boards should be uniform in width and thickness throughout their length and thoroughly airdried (fig. 12).

Sam Bryant of Bradley County, Ark., built his barn—32 by 40 feet—for \$60, using farm timber (fig. 13).



ARKANSAS AGRICULTURAL EXPERIMENT STATION

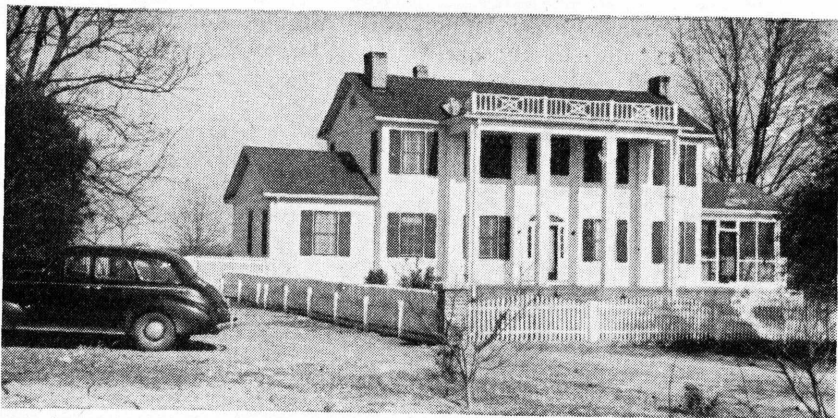
FIGURE 13.—Barn on the Sam Bryant farm, Bradley County, Ark.: A, under construction; B, finished.

Good brooder and laying houses are essential in profitable poultry production. Frederick Webb of Johnson County, S. C., drew on his farm-timber bank to pay all the costs of a new poultry house (fig. 14). The 5,000 feet of logs that he cut provided enough lumber for the



FIGURE 14.—The farm woods provided lumber for this new poultry house on the Frederick Webb place, Johnson County, S. C.

house and paid for sawing, labor, and materials, including wire, cement, and hardware. The total expenditure—met by the sale of timber—was \$73.65. A poultry house built on a similar plan with purchased materials and hired labor would have cost approximately three times his cash outlay.

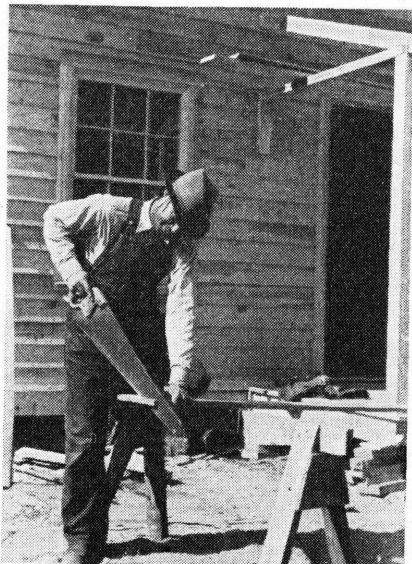


F-407233

FIGURE 15.—The new Colonial home on the Hugh Perow farm near Cameron, S. C. One-third of its construction costs were derived from the sale of timber on a 70-acre woodland tract owned by the Perows.

TIMBER FOR FARM HOME, TENANT HOUSE, AND OTHER STRUCTURES

Many farmers in the South have solved their building problems by using home-grown timber. Others have sold timber products and used the income for building purposes.



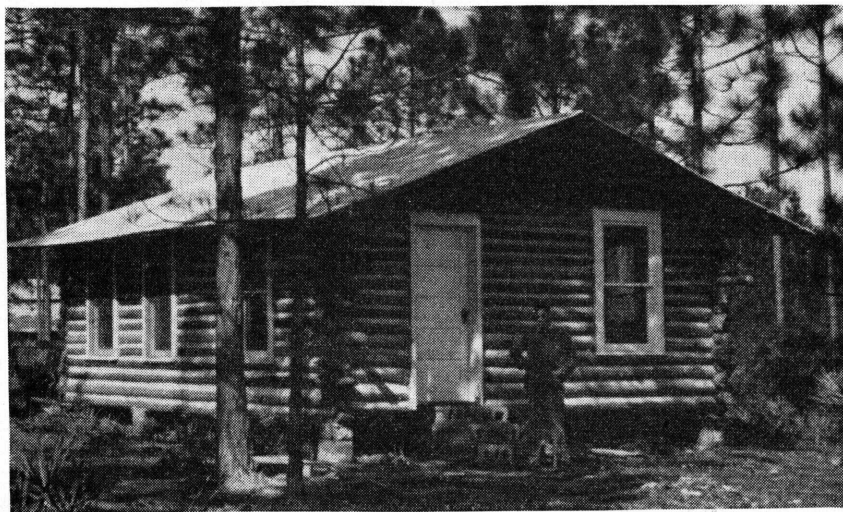
F-407220

FIGURE 16.—Building a tenant house with farm lumber on the J. H. McCuen farm, near Belton, S. C.

Sometimes cash from the sale of farm timber helps out in emergencies. When Hugh Perow's home near Cameron, S. C., burned down, he was faced with the choice of building a new house or selling the farm. He chose to build. His 70 acres of woodland, containing over 250,000 board feet of high quality timber, was as good as an insurance policy. Returns from the sale of timber covered one-third of the cost of his colonial-type dwelling (fig. 15). And one year after the timber was cut, Mr. Perow replanted the land with 20,000 slash pine trees, which he hopes to see grow into a mature forest equal in value to the former stand.

Farm timber has often enabled landowners to provide better houses for their tenants. The farm of J. H. McCuen, near Belton, S. C., furnished about 6,000 board feet of sawlogs for a new tenant house. An additional quantity was traded for doors, window sash, ceiling, flooring, and chimney bricks. Calven Pruitt, the Negro tenant farmer, helped to cut the logs and build the house, which

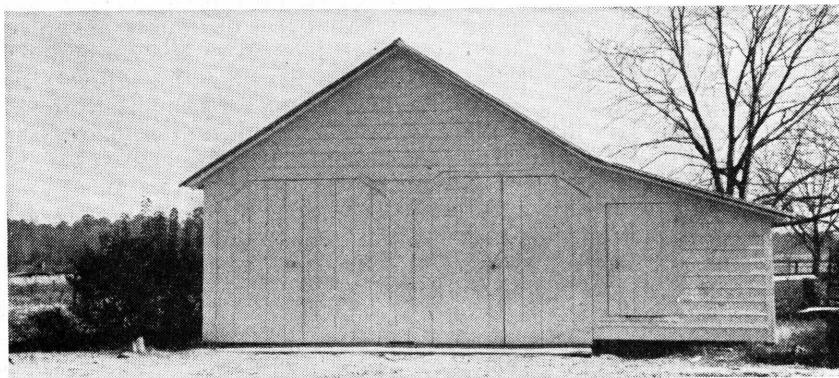
measures 26 by 28 feet, and contains two bedrooms, a living room, and a kitchen (fig. 16). Construction costs, including carpentry work and sawing, amounted to \$200. The house has an estimated value of \$500.



F-407396

FIGURE 17.—E. C. Gieger, Duval County, Fla., erected this sturdy house for his tenant. The lumber consisted mainly of pine poles from his woodland.

E. C. Gieger, Duval County, Fla., built a comfortable tenant house (fig. 17) with the help of suggestions from a U. S. Department of Agriculture Farmers' Bulletin on the use of logs and poles in farm construction. The pine poles were cut on the farm by Mr. Gieger



F-407229

FIGURE 18.—Combination two-car garage and tool shed built by H. G. Hagler, Cameron, S. C., with lumber sawn from farm timbers.

and his sons. The house, 16 by 26 feet, has three rooms. Total cash spent was \$130 for windows, doors, roofing, and water pipe.

H. G. Hagler, Cameron, S. C., erected a combination two-car garage and tool shed, 19 by 24 feet, with home-grown timber (fig. 18).

The logs were cut in February and sawed soon afterwards. The garage was built the following August, after the lumber had been well seasoned.

GETTING OUT THE LUMBER

In many cases it is practicable for farmers to get out their own lumber for building purposes (fig. 19). By cutting the larger trees free of limbs, they can often have better quality and a much larger quantity of lumber than they could otherwise afford. In many of



F-397873

FIGURE 19.—An Alabama farmer using a timber scale stick to estimate the board foot volume in a standing tree. With this information a farmer can determine the number of trees needed to produce the quantity of lumber required for a farm-building job.

the building operations illustrated in this bulletin, farmers used the better grades of lumber. Pines are commonly used for all building purposes. Hardwoods are frequently used for making timbers, framing lumber, and in log construction. Hand-rived shingles give satisfactory service and cut building costs considerably (fig. 20).

LOGGING AND MILLING

Farmers usually cut their own logs, but they do not always have the heavy equipment needed for hauling them to the mill. If the sawing job is large enough, owners of portable sawmills will bring their equipment to the farm. This arrangement eliminates the need for hauling logs to the nearest mill, which may be several miles away. However, if only a few thousand feet of lumber are to be sawed, haulers in the community will usually take the job, or the mill operator, for a small additional

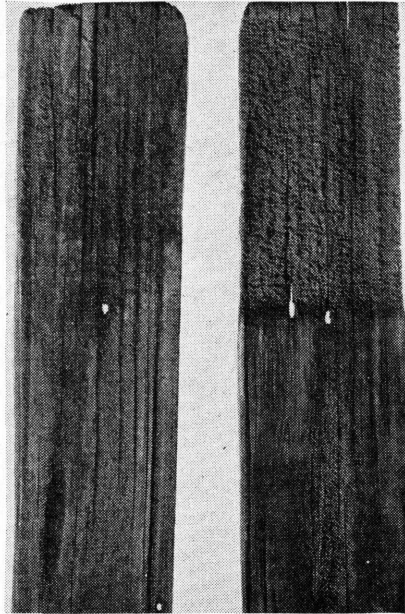
charge, may truck the logs to his mill and return the lumber. Portable and stationary mills ordinarily do custom sawing for a moderate charge or on a toll basis, taking part of the lumber as payment. A list of the approximate number of the various sizes and lengths of boards and dimension stock needed will help to determine the quantity and sizes of logs to be cut. This list can be turned over to the millman as a guide in sawing the logs.

DRYING

The farm builder should not use green lumber because of the checking, shrinking, and warping which cause cracks in the finished structure and provide entrance to moisture and decay. The moisture content of green lumber can be reduced by air seasoning on the farm. The lumber should be piled with stickers or end-racked. A good circulation of air and water drainage should be provided by stacking the lumber on a foundation off the ground and elevating the front end of

the pile. The boards should be laid with a slope from front to rear of about an inch to the foot.

Lumber should be carefully piled with stickers of uniform size and protected with a board roof until the moisture content has been reduced to about 20 percent. It takes $1\frac{1}{2}$ to 2 months to air-dry 1-inch southern pine stock to this moisture content, depending on weather conditions. The minimum period is needed for stock piled in the spring and summer—the best drying seasons. It takes at least two weeks longer to reduce the moisture of 2-inch lumber to 20 percent.



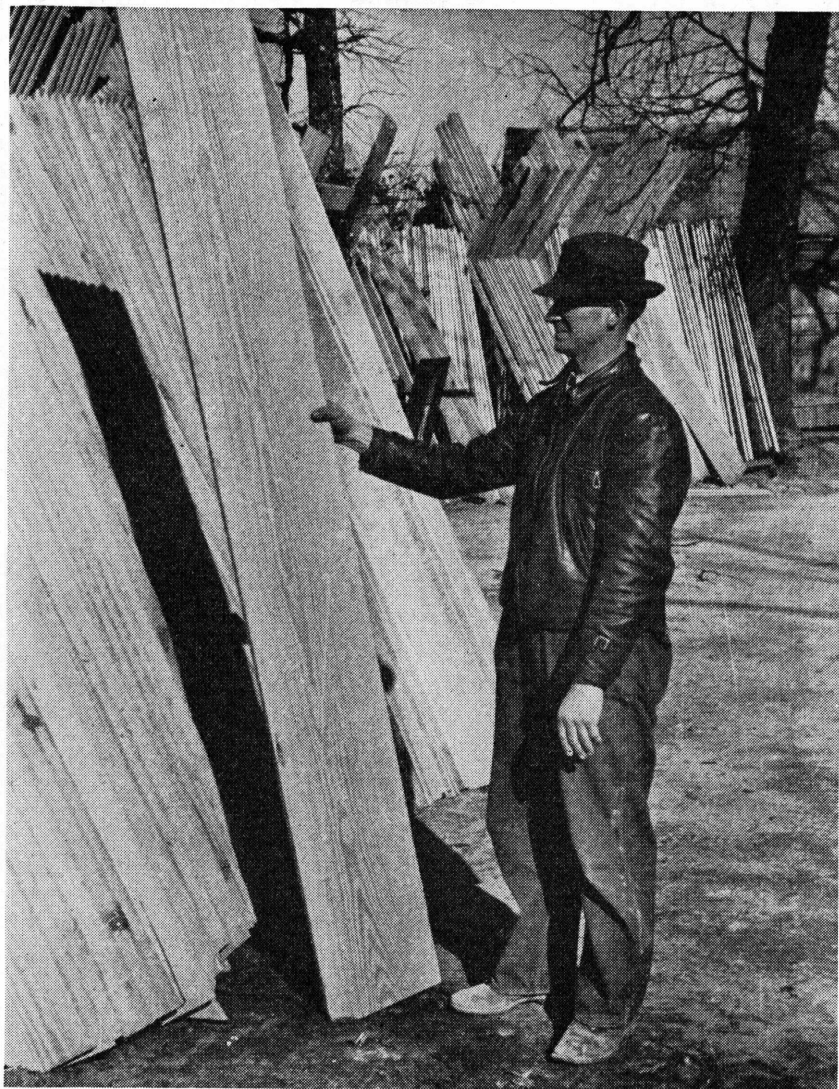
F-353167, S-7804

FIGURE 20.—Making hand-rived shingles from farm timber helps to cut building costs. The hand-made cypress shingles shown at the right were laid in 1854 on a farmhouse roof in Columbus County, N. C. They were removed in 1914, after 60 years of service.

Hardwoods may require 180 to 240 days or more, depending on the species.

Drying can also be speeded up by end-racking, or placing the boards on edge in a rack at an angle of about 45° (fig. 21). This method involves more danger of checking and warping because of rapid drying. End-racking can be used with sap gum which stains badly if piled green, especially at the point where the stickers cross. Usually, however, after a few days of end-racking to dry the surfaces of the boards, the lumber is piled in a stack for further seasoning with stickers between each layer.

Farmers usually cut their timber in winter, when other farm work is not pressing, saw the logs and pile them for drying until midsummer, by which time the moisture content is sufficiently reduced to begin building operations. During the winter-to-summer drying interval



F-407240

FIGURE 21.—Lumber end-racked for drying at an angle of 45°. This high quality stock, sawn from shortleaf pine, will be well suited for farm building when sufficiently air-dried.

other building materials can be assembled, final changes in building plans made, and other arrangements completed.

LUMBER FOR REPAIRS

Because of the almost daily need for lumber to repair equipment, gates, sheds and other buildings, many farmers keep a small quantity of boards and dimension stock on hand. Such lumber, if stored overhead in sheds or other protected places, will be dry and ready for

immediate use whenever needed. A reserve lumber supply, with a generous quantity of 2 by 4's and boards, is as necessary for the upkeep of farm buildings as are tools for keeping farm machinery in good shape.

SOUTHERN WOODS FOR FARM BUILDINGS

The South has a number of hardwoods and pines suitable for farm construction. Some of the more important woods are given in table 1 along with lumber uses, sizes of material, and specifications. The term "southern pine" includes several species, such as longleaf, slash, loblolly, and shortleaf. It is important to have lumber well manufactured and to use air- or kiln-dried stock as specified.

TABLE 1.—*Uses of Southern Woods in Farm Buildings*

Use	Size ¹	Specifications ²	Suitable Woods ³
Sills (untreated)	6" x 6" and larger	Sound, hewn or sawn square, air-dried. Bark should be removed.	White oak, chestnut, locust, heart cypress, or heart longleaf pine.
Sills (treated with preservative). . . .	6" x 6" and larger	Sound, hewn or sawn square, air- or kiln-dried.	Sap southern pine, sap cypress, red oak, or any other available woods.
Timbers, beams and stringers.	5" (or thicker) by 8" (or wider).	Sound, hewn or sawn square, air-dried. Bark should be removed.	White oak, chestnut, locust, heart cypress or heart longleaf pine, red oak, and others.
Joists, rafters, and trusses.	2" to 4" thick by 4" (or wider).	Sound, square-edged, air-dried. May be used rough or dressed.	Southern pine or hardwoods.
Roof boards and sheathing.	1" x 6", 1" x 8", 1" x 10".	Sound, square-edged, air-dried, dressed.	Do.
Studding, plates	Usually 2" x 4" and 2" x 6".	Sound, square-edged, air-dried. May be used rough or dressed.	Do.
House siding	Any standard pattern desired.	Kiln-dried, drop or bevel siding.	Cypress, or southern pine.
Barn siding (and for other out-buildings).	1" x 8", 10", or 12" wide.	Common boards with sound tight knots, air-dried. Applied vertically with battens.	Southern pine, cypress, or any available hardwood.
Exterior house trim.	1" x 2" to 1" x 6" and moulding.	Sound, clear, square-edged, kiln- or air-dried.	Cypress and southern pine.
Sub-flooring	1" x 6", 1" x 8", and 1" x 10".	Common boards, sound, air-dried, rough or dressed.	Cypress, southern pine, or hardwoods.
House flooring (softwood).	Face width 2 3/4" and 3 1/4".	Kiln-dry stock of grade desired, flat or vertical grain.	Southern pine.
House flooring (hardwood).	Face width 1 1/2", 2", 2 1/4", and 3 1/4".	Kiln-dry stock of grade desired, flat or vertical grain.	Oak, pecan, beech, birch, and hard maple.
Plank flooring (for barns).	2" x 8", 2" x 10", 2" x 12".	Sound, strong, air-dried, square-edged.	Cypress, southern pine, or hardwoods.
Gates and fences	1" x 4" or 6"	Sound, light weight, air-dried, square-edged, rough or dressed.	Cypress, southern pine, or hardwoods.
Tanks and vats	Various sizes of boards.	High grade heartwood, free of knots, air or kiln-dried, rough or dressed.	White oak, cypress, southern pine, or cedar.
Fence posts	3" diameter and up, 6' to 7' long.	Sound, durable, bark should be removed. Less durable woods should be treated with preservative.	Osage orange, locust, red cedar, mulberry, white oak, heart cypress, heart longleaf pine. (Most other woods should be treated.)
Shingles	Random or standard width, 16", 18" or 24" long.	Sound, edge grain, sawed or split, air-dried. Less durable woods should be treated with preservative.	Cypress, chestnut, pine, white oak, and other desirable woods.

¹ The sizes of lumber items to be used will be determined by the building plans.

² High-grade air- or kiln-dried stock, such as house siding, trim, flooring, and special purpose items needed in farm construction, can usually be obtained at retail lumber yards.

³ Only the commonly used Southern woods are listed. Others suitable for the purpose can be used. For more detailed information on suitability of different species, see U. S. Department of Agriculture, Farmers' Bulletin No. 1756, Selection of Lumber for Farm and Home Building.

PUBLICATIONS ON THE CONSTRUCTION OF FARM BUILDINGS AND RELATED SUBJECTS

The following publications of the U. S. Department of Agriculture may be obtained from your local county agricultural agent or purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Order by number.

FARMERS' BULLETINS

- 744—The Preservative Treatment of Farm Timbers.
- 1227—Sewage and Sewage of Farm Homes.
- 1426—Farm Plumbing.
- 1448—Farmstead Water Supply.
- 1452—Painting on the Farm.
- 1460—Simple Plumbing Repairs in the Home.
- 1512—Protection of Buildings and Farm Property from Lightning.
- 1582—Protection of Log Cabin, etc., from Injurious Insects.
- 1643—Fire Safeguards for the Farm.
- 1660—The Use of Logs and Poles in Farm Construction.
- 1698—Heating the Farm Home.
- 1738—Farmhouse Plans.
- 1749—Modernizing Farmhouses.
- 1751—Roof Covering for Farm Buildings and Their Repair.
- 1756—Selection of Lumber for Farm and Home Building.
- 1772—Use of Concrete on the Farm.
- 1838—Electric Light for the Farmstead.
- 1869—Foundations for Farm Buildings.
- 1889—Fireplaces and Chimneys.
- 1911—Subterranean Termites and Their Control.
- 1950—Sewage and Garbage Disposal on the Farm.

MISCELLANEOUS PUBLICATIONS

- 358—Use and Abuse of Wood in House Construction.
- 360—Plans of Farm Building for Southern States.
- 509—Operating Small Sawmills in Wartime.